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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Alex Cheru PULIKOTTIL et al.

Confirmation No.: 7864

Patent No.: 6,855,653 B2

Application No.: 10/721,078

Patent Date: February 15, 2005

Filing Date: November 26, 2003

For: PROCESS FOR PREPARING HYDRO-DESULFURIZATION CATALYST

Attorney Docket No.: 81930-4000

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.322

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Patentees hereby respectfully request the issuance of a Certificate of Correction in connection with the above-identified patent. The corrections are listed on the attached Form PTO-1050, submitted in duplicate. The corrections requested are as follows:

At column 12, line 16 (claim 29, first line of the table after the heading), after "CoO", delete "13.841" and insert -- 3.841 --. Support for this change can be found in the originally filed application at claim 29.

At column 12, line 31 (claim 30, last line of table), after "Metal", delete "cluste" and insert -- cluster --. Support for this change can be found in the originally filed application at claim 30.

The requested corrections are for errors that appear to have been made by the Office. Therefore, no fee is believed to be due for this request. Should any fees be required, however, please charge such fees to Winston & Strawn LLP Deposit Account No. 50-1814. Please issue a Certificate of Correction in due course.

Respectfully submitted,

2/25/05
Date

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MAR 4 2005

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO.: 6,855,653 B2
DATED: February 15, 2005
INVENTORS: Pulikottil et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 12:
Line 16, in the first line of the table after the heading, after "CoO", delete "13.841" and insert -- 3.841 --.
Line 31, in the last line of the table, after "Metal", delete "cluste" and insert -- cluster --.

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-continued

Surface Area (BET)	250 m^2/g
Pore Volume	0.50 ml/g

8. A process as claimed in claim 1 wherein in step (a), the complexing agent is soduim salt of EDTA.

9. A process as claimed in claim 1 wherein in step (b), the metal impregnated alumina support is flash dried by heating at a temperature ranging from about 40° to 200° C.

10. A process as claimed in claim 9 wherein, the metal impregnated alumina support is flash dried by heating at a temperature ranging from about 80° to 150° C.

11. A process as claimed in claim 1 wherein in step (c), the flash dried metal-impregnated alumina support is ball milled for a time period ranging from about 10 minutes to 1 hour.

12. A process as claimed in claim 11, wherein the flash dried metal-impregnated alumina support is ball milled for about 30 minutes.

13. A process as claimed in claim 1 wherein in step (d), the Unit Cell Size (UCS) of the USY zeolite used is in the range of about 24.25 to 24.45 Å.

14. A process as claimed in claim 13, wherein the UCS of the USY zeolite is about 24.35 Å.

15. A process as claimed in claim 1 wherein in step (d), the weight percentage of USY zeolite used is in the range of about 1 to 10.

16. A process as claimed in claim 15, wherein the weight percentage of USY zeolite used is in the range of about 1 to 5.

17. A process as claimed in claim 1 wherein in step (e), the mixture of ball-milled metal-impregnated alumina support and USY zeolite is ball milled for a time period ranging from about 10 minutes to 2 hours.

18. A process as claimed in claim 17, wherein the mixture of ball-milled metal-impregnated alumina support and USY zeolite is ball milled for a time period ranging from about 10 minutes to 1 hour.

19. A process as claimed in claim 1 wherein in step (f), the phosphorous source is di-ammonium hydrogen phosphate.

20. A process as claimed in claim 19, wherein di-ammonium hydrogen phosphate used is in the weight range of about 0.1 to 5% by total weight of P_2O_5.

21. A process as claimed in claim 20, wherein the di-ammonium hydrogen phosphate used is in the weight range of about 0.1 to 2% by total weight of P_2O_5.

22. A process as claimed in claim 1 wherein in step (g), the mixture is aged for a time period ranging from about 1 to 2 hours.

23. A process as claimed in claim 1 wherein in step (h), molding is done by extrusion or granulation.

24. A process as claimed in claim 23, wherein the mixture is molded in the form of cylinders, granules or tablets.

25. A process as claimed in claim 23, wherein the diameter of the extrudate is in the range of about 0.5 mm to 3.0 mm.

26. A process as claimed in claim 23, wherein the extrudate is dried at a temperature ranging between ambient temperature and 150° C. for a time period ranging from about 10 to 30 hours.

27. A process as claimed in claim 26, wherein the dried extrudate is calcined at a temperature ranging from about 250° to 800° C.

28. A process as claimed in claim 27, wherein the dried extrudate is calcined at a temperature ranging from about 250° to 600° C.

29. A process as claimed in claim 1 wherein in step (h), the hydrotreating catalyst thus obtained has the following composition:

Ingredient	Weight %
CoO	13.841
MoO_3	20.154
Na_2O	0.002
P_2O_5	0.094
Al_2O_3	71.947
USY	3.962

3.841

30. A process as claimed in claim 1 wherein in step (h), the hydrotreating catalyst thus obtained has the following characteristics:

UCS (Å)	24.28
Total SA, m^2/g	Greater than 260
Pore Volume, cc/gm	0.25 to 0.45
Metal cluster size (Å)	Less than 50

cluster

31. A process as claimed in claim 30, wherein the hydrotreating catalyst thus obtained has the following characteristics:

UCS (Å)	24.28
Total SA, m^2/g	279
Pore Volume, cc/gm	0.29
Metal cluster size (Å)	Less than 50

32. A process as claimed in claim 1, wherein the metal is preferentially loaded on the alumina support and the zeolite is substantially free from the metal.

33. A process as claimed in claim 1, wherein the hydrotreating catalyst removes refractory sulfur species from gas oils.

34. A process as claimed in claim 1, wherein the hydrotreating catalyst produces gas oil having less than about 50-ppm sulfur from a gas oil feedstock having about 1 wt % sulfur content under commercial operating conditions.

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